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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/607,916      | 06/27/2003  | Yoshiaki Nishiya     | 223380              | 8116             |

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EXAMINER

DO, PENSEE T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1641

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

7#

|                              |                               |                                |  |
|------------------------------|-------------------------------|--------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/607,916 | Applicant(s)<br>NISHIYA ET AL. |  |
|                              | Examiner<br>Pensee T. Do      | Art Unit<br>1641               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-24 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/30/03; 3/1/04; 8/1/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of group I, claims 1-14 in the reply filed on August 01, 2006 is acknowledged. The traversal is on the ground(s) that search and examination of the subject matter in all the groups together would not place a serious burden on the examiner. This is not found persuasive because the three groups are classified in differently and examining for the composition does not require the search for the steps of a method of making or a method of using. Thus, for the reasons above and explanations sent in the previous office action, it would a serious burden on the examiner to search and examine all three groups together.

The request for rejoining the groups upon indication of the allowable subject matter has been considered and all the claims would be rejoined upon indication of allowable subject matter if the non-elected claims were in condition for allowance.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

Claims 12-14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 12. See MPEP § 608.01(n). Accordingly, the claims 12-14 not been further treated on the merits.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4, 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 6, 7 of U.S. Patent No. 6,844,426. Although the conflicting claims are not identical, they are not patentably distinct from each other because patent '426 teaches a magnetic carrier which has a saturation magnetization of  $20 \text{ A m}^2 / \text{kg}$  –  $100 \text{ A m}^2 / \text{kg}$  which overlaps the range in claim 1, and a coercive force of not more than  $15.93 \text{ kA/m}$ , which covers the range of  $0.80\text{--}15.92 \text{ kA/m}$  in claim 1 of the present invention. Patent '426 also discloses that the particles size of  $0.05 \text{ }\mu\text{m}$  to  $20 \text{ }\mu\text{m}$  which covers the size range of  $0.1\text{--}10 \text{ }\mu\text{m}$  recited in claim 3 of the present invention. Patent '426 also discloses ferromagnetic iron oxide is a magnetite particle. Regarding claims 2 and 4, which are drawn to functional limitations, it is inherent that the particles of patent '426 can function the same way because they are the same particles as those in the present invention. It would have been obvious to one of ordinary skills in the art to vary the saturation magnetization of patent '426 to arrive at the saturation magnetization range of the present invention since it has been held that where the general conditions of a claim are disclosed in the prior art,

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discovering the optimum workable range involves only routine skill in the art. In re Aller, 105 USPQ 233.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 9, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamanouchi et al. (US 5,804,357).

Yamanouchi teaches magnetic particles such as ferromagnetic iron oxides or co-coated magnetite with particle size range of 0.01-0.8  $\mu\text{m}$  (which is within the claimed range of 0.1-10  $\mu\text{m}$  of the present invention). The magnetic particles have a saturation magnetization of 50 to 100 emu/g (equivalent to 50 –100 A.m<sup>2</sup>/kg), which covers the range of 10-80 emu/g claimed in the present invention and a coercive force range of 200-2000 oersted, which covers the claimed range of 0.8-15.92 kA/m (equivalent to 10-200 oersted) in the present invention. (see col. 22, line 43-col. 23, line 12). With regards to claims 2 and 4, it is inherent that the magnetic particles of Yamanouchi have the same functions or function the same ways as those claimed in claims 2 and 4 because Yamanouchi teaches the same magnetic particles with the same properties such as saturation magnetization and coercive force ranges, and size range. With regards to

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claims 5 and 9, Yamanouchi teaches that the magnetic particles are surface-treated with silica and/or alumina. (see col. 23, lines 10-12). Claim 10 is taught above.

Claims 1-4, 9, 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Horo (US 4,124,735).

O'Horo teaches magnetic glass carrier particles comprising about 12% wt of superparamagnetic ferrite crystallites, 34 % wt of SiO<sub>2</sub> (silicon oxide), 8% wt of Al<sub>2</sub>O<sub>3</sub> (aluminum oxide), CaO and B<sub>2</sub>O<sub>3</sub>. Such magnetic particles have a saturation magnetization of about 14.5 emu/gm and a coercive force of about 50 oersteds. (see example III, col. 10). With regards to claims 2 and 4, it is inherent that the magnetic particles of O'Horo have the same functions or function the same ways as those claimed in claims 2 and 4 because O'Horo teaches the same magnetic particles with the same properties such as saturation magnetization and coercive force ranges, and size range. With respect to claim 11, the compound in O'Horo has an aluminum content of 8%, which falls within the claimed range 0.1-40 wt %. (see example III). With respect to claim 12, the compound of O'Horo is comprised of a proportion of 8% wt aluminum and 34 % of silicon oxide, which falls within the claimed range of 3-100 wt%. With respect to claim 13, O'Horo teaches the compound comprises of SiO<sub>2</sub>, and Al<sub>2</sub>O<sub>3</sub>, which are in the form of an oxide.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Yudelson (US 4,965,007).

Yudelson teaches superparamagnetic magnetite particles having an average particle size range of 50-350 Angstroms (equivalent to 0.05-0.35 microns which falls

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within the claimed range of 0.1-10 microns) (see abstract), which have a saturation magnetization greater than about 50 emu/gm and a coercive force of less than about 25 Oersteds (see claim 8). These ranges fall within the claimed ranges of the present invention. With regards to claims 2 and 4, it is inherent that the magnetic particles of Yudelson have the same functions or function the same ways as those claimed in claims 2 and 4 because Yudelson teaches the same magnetic particles with the same properties such as saturation magnetization and coercive force ranges, and size range.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8, 11, 12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanouchi (US 5,804,357).

Yamanouchi has been discussed above but fails to teach that the magnetic particles having an aspect ratio of 1.0-1.2 and silica coating in a proportion of 3-100 wt%, aluminum content of 0.1-40 wt% of the total amount of silicon and aluminum.

It would have been obvious to one of ordinary skills in the art at the time the invention was made to prepare the magnetic particles in an aspect ratio of 1.0-1.2 and silica or silica/aluminum coating in a proportion of 3-100 wt%, or aluminum content of 0.1-40 wt% of the total amount of silicon and aluminum, since Yamanouchi teaches that the magnetic particles in their invention can be surface treated with silica and/or alumina

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and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Furthermore, Yamanouchi teaches the same magnetic particles made up of ferromagnetic iron oxide and having the same saturation magnetization and coercive force ranges as well as same size range, it is obvious that the aspect ratio of the particles are the same because it is the make-up composition, e.g. aspect ratio, weight, etc. , of the magnetic particles that provides properties such as saturation magnetization and coercive force as well as size range.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Horo.

O'Horo has been discussed above for teaching the magnetic carrier comprising of an average particle size of 10  $\mu\text{m}$  to 850  $\mu\text{m}$ , a coercive force of about 50 Oersteds, and a saturation magnetization of about 14.5 emu/gm except for the aspect ratio of 1.0-1.2.

Since O'Horo teaches the same particle composition, particle size, coercive force and saturation magnetization, it would have been obvious to one of ordinary skills in the art at the time the invention was made to prepare the magnetic particles in an aspect ratio of 1.0-1.2 as claimed because it is the ratio of the particles along with size range and composition of the particle are factors that produce the particles with certain magnetic properties such as coercive force or saturation magnetization. Furthermore, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.



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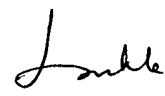
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pensee T. Do whose telephone number is 571-272-0819. The examiner can normally be reached on Monday-Friday, 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pensee T. Do  
Patent Examiner  
September 23, 2006

  
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